

EX

Notice of Allowability	Application No.	Applicant(s)	
	10/715,181	MINARDI ET AL.	
	Examiner	Art Unit	
	William C. Choi	2873	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed 9/28/2005.
2. ☒ The allowed claim(s) is/are 6,9,10,13,14,19,22-37 and 40-43.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |


RICKY L. MACK
PRIMARY EXAMINER

Art Unit: 2873

Allowed Claims: 6, 9, 10, 13, 14, 19, 22-37 and 40-43.

REASONS FOR ALLOWANCE

The following is an examiner's statement of reasons for allowance: none of the prior art either alone or in combination disclose or teach of the claimed combination of limitations to warrant a rejection under 35 USC 102 or 103.

Specifically, with respect to independent claim 6, none of the prior art alone or in combination disclose or teach of an optical device comprising first and second elements having respective indices of refraction as claimed, specifically wherein the radiated beam is substantially transmitted through the portion between the conductive layers or plates and wherein the first element can change the entry direction of the radiated beam into the second element to cause total internal reflection of the beam in the second element.

Specifically, with respect to independent claim 9, none of the prior art alone or in combination disclose or teach of an optical device comprising first and second elements having respective indices of refraction as claimed, specifically wherein the radiated beam is substantially transmitted through the portion between the conductive layers or plates and wherein said device further comprises first and second orienting layers disposed on the first and second conductive plates, facing each other with the refractive layer disposed between said orienting layers.

Specifically, with respect to independent claim 13, none of the prior art alone or in combination disclose or teach of an optical device comprising first and second

elements having respective indices of refraction as claimed, specifically wherein the radiated beam is substantially transmitted through the portion between the conductive layers or plates and wherein the first element includes a liquid crystal layer that acts as a refractive layer.

Specifically, with respect to independent claim 19, none of the prior art alone or in combination disclose or teach of an optical device comprising first and second elements having respective indices of refraction as claimed, specifically wherein a radiated beam at an interface between the first and second elements includes a spurious signal and wherein at least one of the first and second elements has a length that attenuates the spurious signal to a predetermined desirable level.

Specifically, with respect to independent claim 22, none of the prior art alone or in combination disclose or teach of an optical device comprising an active element having first and second conductive substrates, first and second orienting layers and a refractive layer as claimed, specifically further comprising a passive element, wherein one of the active and passive element can change an entry direction of a radiated beam into the other of the active and passive element and wherein the beam is substantially transmitted through the active element between the first and second conductive substrates.

Specifically, with respect to independent claim 40, none of the prior art alone or in combination disclose or teach of a method of manufacturing an optical device providing an active element having first a refractive layer between first and second conductive layers as claimed, specifically further comprising depositing a first and

Art Unit: 2873

second orienting layer on the first and second conductive layers, respectively, wherein the refractive layer is sandwiched between the first and second orienting layers.

Specifically, with respect to independent claim 43, none of the prior art alone or in combination disclose or teach of a method of manufacturing an optical device providing an active element having first a refractive layer between first and second conductive layers as claimed, specifically wherein the refractive layer is a liquid crystal layer and wherein the method includes a depositing act that comprises aligning the liquid crystal molecules in heterotropic alignment.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONCLUSION

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nashimoto et al (U.S. 6,385,355 B1) and Natarajan et al (U.S. 6,821,457 B1) are being cited herein to show representative examples in the art to which the instant invention pertains. However, the prior art fails to disclose wherein the radiated beam is substantially transmitted between conductive layers or wherein orientating layers are disposed as claimed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William C. Choi whose telephone number is (571) 272-

Art Unit: 2873


2324. The examiner can normally be reached on Monday-Friday from about 9:00 am to 6 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W.C

William Choi
Patent Examiner
Art Unit 2873
December 5, 2005


RICKY L. MACK
PRIMARY EXAMINER